



Challenges Facing Housing Markets in the Next Decade

Developing a Policy-Relevant Research Agenda

Vicki Been and Ingrid Gould Ellen

Furman Center for Real Estate and Urban Policy

April 2012



The *What Works Collaborative* is a foundation-supported research partnership that conducts timely research and analysis to help inform the implementation of an evidence-based housing and urban policy agenda. The collaborative consists of researchers from the Brookings Institution's Metropolitan Policy Program, Harvard University's Joint Center for Housing Studies, New York University's Furman Center for Real Estate and Urban Policy, and the Urban Institute's Center for Metropolitan Housing and Communities, as well as other experts from practice, policy, and academia. Support for the collaborative comes from the Annie E. Casey Foundation, Ford Foundation, John D. and Catherine T. MacArthur Foundation, Kresge Foundation, Rockefeller Foundation, Surdna Foundation, and the Open Society Institute.

The views expressed here are those of the authors and do not necessarily reflect the views of those funders listed above or of the organizations participating in the What Works Collaborative. All errors or omissions are the responsibility of the authors.

The authors give special thanks to Kimberly Ong, Research Fellow, and to research assistants Kate Klonick and Jacob Faber for their careful and tireless research; and to Eric Belsky, Caitlyn Brazill, Mary Cunningham, Samuel Dastrup, Rosanne Haggerty, Chris Herbert, Andrew Hayashi, Daniel Immergluck, John Infranca, Gary Painter, Rolf Pendall, and Mark Willis and participants in our October 2011 roundtable for insightful suggestions and critiques.

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Introduction

Although policymakers are still working to mitigate the immediate effects of the dramatic downturn in the U.S. housing market, they also must prepare for the challenges that lie ahead. We propose a research agenda that can help federal policymakers better understand the implications those challenges have for housing and community development programs and policies and design cost-effective responses to the challenges. We organize this paper around four major challenges:

- The long-term effects of the housing market crisis on today's households and on the next generation
- Increasing poverty coupled with persistently high income inequality and volatility
- Continued concentration of poor and minority households in low-quality housing and low-opportunity neighborhoods
- The growing need for sustainable and resilient buildings and communities

In each case, we consider how these challenges may alter the residential choices of housing consumers and shape the behavior of suppliers. We then explore what existing research tells us about the implications each issue has for housing policy and assess what questions remain unexplored or unanswered. Finally, we suggest a series of research studies that can help to fill these important gaps.

It is worth stressing that housing markets are local, and different areas of the country face distinct challenges. The four challenges we highlight in this paper are relevant for most areas, though their intensity clearly varies. This variation, together with differences in market conditions, calls for flexibility in the design of federal housing programs, to allow some tailoring to local conditions. A strategy appropriate for a city with a relatively strong economy may not be workable in a weak-market city.

These questions are all the more pressing, as well as more difficult, given the significant budgetary shortfalls that federal, state, and local policymakers will face in the coming years. The U.S. federal government faces short-, medium-, and long-term fiscal deficits, and many state and local governments face similar (or even more significant) problems. Indeed, depending on policy choices and economic variables, an immediate and permanent increase in taxes or reductions in expenditures of as much as \$1.5 trillion annually may be required to correct the long-run debt-to-GDP ratio (Auerbach and Gale 2011).

These budgetary pressures may grow in the coming years, given the looming retirement of the baby boomers, which will impose greater costs on entitlement programs (Auerbach and Gale 2011). The recent housing crisis and current overhang in residential housing investment also has brought housing policy under increased scrutiny. It seems likely, in light of the current fiscal situation, that such scrutiny will result in demands for a wide variety of reforms and for more cost-effective housing policy.

To assign housing policy its proper place in the hierarchy of budget priorities and enable it to compete for government support, it will be important to clearly articulate the goals of government housing policy and to adopt the most efficient tools available to achieve them. The Department of Housing and Urban Development (HUD) will need to do more to evaluate the cost-effectiveness of its programs and to find ways to make programs more efficient and serve more households with less support.

Significantly, cuts made to other government spending and transfer programs could also affect the affordability of housing as well as the cost-effectiveness of various HUD programs. If the generosity of income support programs declines, for example, then housing subsidies will have to pay a greater share of rent for assisted households. If spending on social services and police fall, then local housing authorities may need to spend more on services and security to stabilize their public housing developments. Given these collateral effects, understanding how these policy changes could affect housing markets will also be important.

A robust research agenda can help HUD and the other federal agencies whose work affects the housing market (Treasury, HHS, EPA, and DOT, among others) by identifying the root causes and nuances of the challenges those agencies must address, and by testing various solutions to determine the most cost-effective strategies for addressing those challenges.

Accordingly, each of the four main sections of the paper is devoted to one emerging challenge and begins by explaining the nature of the issue and considering how it may affect the choices and behaviors of both housing consumers and suppliers. Each section then summarizes, very briefly, what we know about the challenge and its implications for housing markets and policies, and what more we need to know in order to make sound policy decisions. Finally, each section suggests, again very briefly, the studies researchers might undertake to help to fill these important gaps.

The Long-Term Effects of the Housing Crisis

The Challenge

Around the country, housing prices are now 30 percent lower on average than they were at the peak of the market. In some markets, prices have declined by more than 50 percent. The latest estimate from CoreLogic suggests that nearly one in four residential mortgages are now underwater. The household wealth losses are staggering, amounting to an estimated \$7 trillion (Ellen and Dastrup 2011). This loss in housing wealth appears to have taken a particularly large toll on minority households. From 2005 to 2009, median wealth fell by 66 percent among Hispanic households and 53 percent among black households, compared with just 16 percent among white households (Kochhar, Fry, and Taylor 2011).

This dramatic decline in housing wealth may have a ripple effect throughout the economy, as households adjust their housing decisions in response. Existing homeowners, for example, may be less likely to sell and move to new communities or downsize, may cut back on housing maintenance and expenditures, or may take in additional household members to help offset housing costs. Children of homeowners may feel a greater need to stay home (or return home) and may be less able to afford the down payments necessary to buy their own homes. Households who have lost their homes may not have the credit scores or savings for down payments to buy new homes, while other households may simply see homeownership as too risky in the wake of the downturn.

We are already seeing a reduction in homeownership rates. The national homeownership rate fell from 67.3 percent in 2006 to 65.4 percent in 2010.¹ While all racial and ethnic groups have experienced a

¹ Homeownership rates for 2006 are from the 2006 American Community Survey, http://factfinder.census.gov/servlet/DTGeoSearchByListServlet?ds_name=ACS_2006_EST_G00_&_lang=en&_ts=335886139287, accessed October 26, 2011. Rates for 2010 are from the 2010 American Community Survey, <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>, accessed October 26, 2011.

decline in homeownership, the fall has been sharpest for blacks and Latinos. According to the American Community Survey, just 44.2 percent of black households and 47.1 percent of Latino households owned their homes in 2010, down from 46.3 and 49.3 percent, respectively, in 2006. Foreclosures likely explain part of the drop. Growing evidence suggests that it is particularly difficult for households who have experienced foreclosure to qualify for a mortgage and return to homeownership because their credit scores are significantly damaged. Mortgage default and foreclosure themselves reduce a borrower's FICO score significantly. In addition, however, homeowners who experience foreclosure often are suffering from broader financial distress that includes the default or delinquency of other consumer loans, further decreasing their credit scores. This distress often persists for years after the foreclosure, impeding the recovery of credit scores to pre-foreclosure levels (Brevoort and Cooper 2010).

Falling homeownership rates also may reflect reduced demand following the housing crash and recession. The homeownership rate may have been inappropriately high—households may have attempted homeownership even though renting would have been a better option for them—and reduced demand may reflect a necessary correction (Gabriel and Rosenthal 2011). Demand may also be falling, however, among households for whom homeownership would be the best option because of risk aversion or lack of information or because a large number of households are shut out of homeownership by the limited availability of credit. From 2005 to 2009, the annual number of home purchase mortgage originations dropped by half, and the drop in lending to black and Hispanic homebuyers was even steeper (Furman Center 2010). While much of this decline in lending reflects decreased demand, it also reflects the disappearance of the subprime mortgage market (which disproportionately served minority borrowers, borrowers with low credit scores, and borrowers making small down payments) and a tightening of underwriting standards in the prime mortgage market. Although lending backed by the Federal Housing Administration (FHA) has rapidly increased in the past few years, mortgage lenders often impose stricter underwriting standards than the FHA requires, shutting some prospective borrowers out of this mortgage market, too (National Community Reinvestment Coalition 2010). Some or all of these increased restrictions on credit availability may be appropriate, or they may reflect an overreaction to the mistakes of the boom years.

While demand for rental units has been swelling, it has not been strong enough to keep overall household growth at normal levels. Many people are delaying forming households as a result of the economic downturn (Painter 2010). It is also possible that people are moving in with families and friends after experiencing a foreclosure, but the evidence here is less clear. One recent analysis finds no evidence that people live in larger households after experiencing foreclosure (Molloy and Shan 2011). What is clear is that household growth has slowed: during the three-year period between 2007 and 2010, the number of new households formed in the United States was about 2.1 million short of the long-term average, according to Census data (Denk, Dietz, and Crowe 2011). The level of housing demand in the next decade depends critically on the economic recovery and the degree to which “Echo Boomers” have the economic means to form their own households (Pendall, Freiman, et al. 2011).

The impact of this decline in household growth, combined with a weakening economy, led to rising vacancy rates in multifamily housing between 2008 and 2010 (Joint Center for Housing Studies 2011a). According to data from REIS, Inc., a company that tracks multifamily housing trends in the top 80 urban markets, the vacancy rate in multifamily rentals hit a 30-year high in the fourth quarter of 2009.² Since that point, however, data from REIS show signs that the rental market has strengthened. Vacancy rates in large multifamily buildings in major markets have fallen since the beginning of 2010, and by the

² Nick Timiraos, “U.S. Now a Renters’ Market.” *Wall Street Journal*, January 7, 2010, real estate section.

second quarter of 2011, the average vacancy rate was 6 percent, back to roughly 2008 levels. With falling vacancy rates, rents have started to rise again, as have the sales prices of apartment buildings. Despite recent price increases, however, property values remain considerably below peak prices, and thus many owners who purchased or refinanced during the height of the market may still be “over-leveraged” (Joint Center for Housing Studies 2011b).

On the housing supply side, many developers are withdrawing from the single-family market, and especially from neighborhoods hard-hit by foreclosures. Construction starts for single-family homes fell from 1.7 million units in 2005 to 445,000 in 2009, 471,000 in 2010, and 431,000 in 2011.³ While 2005 was the peak of the boom, the recent construction numbers are low even for a downturn. Indeed, these annual counts are lower than any on record, at least back to 1959. In the coming decades, we are also likely to see a growing number of existing, single-family homes flood the market, as Baby Boomers age and grow too frail to live independently (Pendall, Freiman, et al. 2011).

We are seeing evidence that many homes are being converted to rentals as more households choose to rent rather than buy single-family homes. The number of single-family rental properties rose by 1.7 million units between 2005 and 2009 (Joint Center for Housing Studies 2011b). These additions increased the proportion of rental units that are single-family homes from 31.0 percent to 33.7 percent (Joint Center for Housing Studies 2011b). Notably, about one-fifth of the new additions to the single-family rental stock were owner-occupied in 2007 (Joint Center for Housing Studies 2011b). The growth is particularly striking in some of the states hardest hit by foreclosures. In Nevada, Florida, and Arizona, the number of families renting single-family homes rose 48 percent between 2005 and 2010 (Wotapka 2011).

Critical Research Questions for Policy

Homeownership policies

What do we know, and what do we need to know?

The magnitude of price declines and the enormous number of foreclosures in recent years call for a reevaluation of U.S. housing and mortgage policy and the various programs aimed at encouraging homeownership. Policymakers have assumed for years that homeownership offered significant benefits to individuals and communities. Yet few recent studies have systematically weighed the risks and benefits of homeownership or evaluated what government efforts, if any, are needed to encourage it. There is considerable evidence that the mortgage interest deduction encourages households to buy larger homes but does little to encourage households at the margin to become homeowners (Gale, Gruber, and Stephens-Davidowitz 2007; Glaeser and Shapiro 2003). We know far less about the efficacy of other incentives and programs designed to encourage homeownership and bolster households’ ability to sustain homeownership. Moreover, what little we do know may not be generalizable to the changed environment.

A few studies suggest that small-scale shared equity programs have helped low-income, first-time homebuyers build wealth with lower risk and maintain affordable homeownership opportunities for the next households that purchase those residences, but it is not clear which program features were critical to success (Temkin, Theodos, and Price 2010). We need to evaluate the costs and benefits of those

³ The U.S. Census Bureau reports annual construction starts online back to 1959 (<http://www.census.gov/construction/nrc/pdf/startsan.pdf>, accessed February 16, 2012).

approaches more rigorously and learn more about which program elements are critical to success before taking these efforts to scale. Many advocates also maintain that lease-purchase agreements can help low-income households become homeowners (Axel-Lute 2011; Schaeffling and Immergluck 2010). Lease-purchase agreements may also provide nonprofits that own the housing stock a way to receive immediate cash flow through rental payments instead of incurring carrying costs from maintenance and the original acquisition price (Axel-Lute 2011). However, not all nonprofit programs have been successful (Goldsmith and Holler 2010). We need more information about the success of lease-purchase programs in promoting homeownership and a better understanding of the features that make programs successful (Arigoni 1997).

As for alternative wealth-building strategies, matched savings programs such as Individual Development Accounts have been shown in randomized trials to help low- and moderate-income households increase employment and homeownership rates, although more recent evidence finds that these effects are not sustained beyond five to seven years (Grinstein-Weiss et. al. 2011; Huang 2009). Other ongoing experiments with flexible matched savings demonstrate some promise, but they are small in scale and need additional rigorous evaluation (Key 2010; Nam et al. 2011).

We also need to know more about how to educate and prepare households for owing a home and taking on debt. Many households in the past decade made home purchase decisions that turned out badly, and we need to understand why households choose to buy homes, and how information and education can help them to make better decisions. Collins and O'Rourke (2011) review 10 studies on prepurchase counseling and education and conclude that participation in prepurchase programs is associated with more timely loan repayment. However, the authors note that none of the evaluations use a randomized-controlled experimental design, and thus it is possible that the participants in counseling and education programs are systematically different from other borrowers and less likely to default. Moreover, counseling and education programs vary quite a bit, and we know little about which features of programs make them helpful, or about which types of programs are most cost-effective. Finally, the studies all focus exclusively on the success rates of the households who buy homes. A more comprehensive assessment would test whether education programs encourage some households who are not ready for homeownership to delay buying a home altogether.

Finally, we need to know more about the challenges posed by the fact that many borrowers face more significant barriers to homeownership in the wake of the economic crisis, with damaged credit scores and lower savings for down payments. As noted, the homeownership rate has been falling in recent years, suggesting that it is more difficult for households to become homeowners and to hold on to their homes over time. A growing body of research also suggests that households who are remaining homeowners are making sacrifices in other parts of their lives to do so. Negative equity appears to be trapping some homeowners in their current location, as they are unable to sell their home at a price high enough to pay off the lender or provide a down payment for a home in another location. Several rigorous studies suggest that such "spatial lock-in" occurs and may contribute to unemployment by preventing people from moving to new job opportunities (Chan 2001; Ferreira, Gyourko, and Tracy 2010). However, some have questioned the degree to which lock-in is affecting labor markets and unemployment (Donovan and Schnure 2011; Schulhofer-Wohl 2010). Moreover, we understand little about how this spatial lock-in is affecting children.

Households may also respond to falling home values by forming larger households. There is considerable evidence that people tend to form larger households in response to reductions in employment and income (Ellen and O'Flaherty 2007; Painter 2010); it is possible that households will respond similarly to

reductions in wealth (Cobb-Clark 2008; Costa 1997; Modena and Rondinelli 2011). Such changes in household formation are critical for policymakers to understand, because they may contribute substantially to housing demand. Changes in wealth are also likely to reduce the ability of households in the next generation to buy homes, as many households have traditionally used family savings to cover down payments.

The loss in housing wealth caused by the housing crash may also be affecting retirement decisions and critical investments in human capital. Homeownership forms a substantial portion of retirement savings, and thus the housing crash may lead people to delay retirement. Losses in housing wealth may also lead households to reduce consumption more generally, including investments in education, training, and health care. The magnitude of these effects is uncertain (Bostic, Gabriel, and Painter 2009; Campbell and Cocco 2007; Carroll, Otsuka, and Slacalek 2010; Case, Quigley, and Shiller 2005; Disney, Gathergood, and Henley 2010).

The existing literature on each of these potential responses is of limited relevance because fine-grained data about housing wealth is difficult to obtain, studies have focused on particular geographic areas, and studies of other housing cycles may not be readily applicable to today's crisis given its magnitude and breadth.

A policy-relevant research agenda

THE DESIRABILITY OF HOMEOWNERSHIP INCENTIVES

- A study reassessing the benefits and costs of homeownership in light of the market crash (relative to other tenure choices, and relative to other savings and investments the household might have made). The study should explore regional differences, as well as differences by race or ethnicity and income; it might also address how we can craft policies to nudge households into the right housing situation—which may or may not be homeownership—and how we can ensure that any subsidies for homeownership do not encourage excess consumption of housing.
- A study exploring the benefits that alternatives to traditional homeownership – such as shared equity, rent-to-own and other lease-purchase programs, and long-term rental leases (with and without renter's insurance)—can offer to households and to communities. The study should carefully document the costs of these programs to learn whether we can achieve some of the benefits of homeownership with lower risks and costs through other tenure models. Researchers should track the residential stability of participants, their success rate in building equity, and, if they eventually purchase their homes, the performance of their mortgages. Research should also pay close attention to particular program features and to the costs of competing models.

DEMAND FOR HOMEOWNERSHIP AND SUPPLY OF OWNER-OCCUPIED HOMES

- A study estimating the wealth losses suffered by households of different racial and ethnic groups and identifying the challenges they pose to the ability of families to become homeowners in the future. The study should assess how the losses in equity may affect the likelihood that the next generation of households will become homeowners. Researchers could rely on a number of different datasets that follow households over time.
- A study identifying how sensitive decisions about household formation are to movements in house prices and losses and gains in home equity. . Research might use existing longitudinal studies to analyze household formation and changes in household composition, perhaps coupled with more

qualitative work interviewing individuals of different generations to understand their preferences for forming independent households as well as the barriers they face.

- A study exploring how losses in home equity, and potential spatial lock-in, are affecting communities. Evidence suggests that stability is generally beneficial for communities and for children's outcomes, but we do not know if these benefits extend to situations where households are stable because their mobility is constrained. Homeowners stuck in place may have a greater tendency to disinvest in their homes, with detrimental effects on surrounding homes. Reduced mobility may also alter the demand for public services and affect municipal budgets, for example by increasing the share of older residents and reducing the number of families with children. Research might rely on surveys or on various linked, geocoded administrative datasets.
- A study identifying how losses in home equity are affecting households' decisions to invest in home maintenance and improvements. Research might use the AHS to study shifts in behaviors of households living in markets experiencing sharp price declines.
- Demographic and market studies analyzing excess inventories in different metropolitan areas and estimating how long it will take the market to absorb them, taking into account projected household growth. Such research could help policymakers understand where housing inventories are truly inflated relative to likely growth. Such research might look separately at suburban and central-city markets.
- A study describing best practices in addressing excess inventories in different metropolitan areas, focusing on both Rust Belt and Sun Belt cities, as the challenges they face differ. Researchers would consider the viability of taking these different efforts to scale.

PREPARATION FOR HOMEOWNERSHIP

- A survey of households to assess how much they know about the potential benefits and costs of homeownership, and the sources of their information about those costs and benefits. Why do households want to become homeowners? What do they see as the costs and benefits of ownership?
- Experiments to understand the efficacy of different models of homeowner education and counseling. Which relatively low-cost interventions (such as short courses or mini-counseling sessions or the use of web-based and telephone counseling) can meaningfully increase the likelihood of sustained homeownership or otherwise improve housing outcomes, such as increasing financial returns or gaining access to areas of greater opportunity?

Land-Use and Other Regulatory and Community Stabilization Policies

What do we know, and what do we need to know?

The housing crash also raises questions about the efficacy of land-use and other regulatory and community stabilization policies. Governments at all levels need to come up with creative new policies and regulations to stem the neighborhood decline that can be triggered by foreclosures. While there is uncertainty about the size of the full real estate owned (REO) stock (and the shadow inventory that is likely to become REO) and the condition of these properties, it is clear that the current Neighborhood Stabilization Program is not funded at a level that can address the magnitude of the problem.⁴ Thus,

⁴ Roughly \$7 billion has been allocated to the program, but CoreLogic estimates the current REO stock is 400,000 units and the total "shadow inventory" is 1.6 million. This shadow inventory includes distressed properties that are seriously delinquent (90 days or more) and properties in foreclosure that are likely to become REO (CoreLogic, "CoreLogic Reports Shadow Inventory

analysis is needed to identify and assess alternatives (such as stricter code enforcement, stepped-up tax foreclosures, or land banking) that may be more cost effective and scalable. A growing body of research points to the negative spillover effects of foreclosures. A number of studies have documented that foreclosures reduce the value of surrounding homes (Harding, Rosenblatt, and Yao 2009; Immergluck and Smith 2006a; Lin, Rosenblatt, and Yao 2009; Rogers and Winter 2009; Schuetz, Been, and Ellen 2008), while a few suggest that foreclosed properties may increase crime (Cui 2010; Ellen, Laco, and Sharygin 2011; Goodstein and Lee 2009; Immergluck, and Smith 2006b). We know far less, however, about the efficacy of land-use, financing, tax, public safety, and other policies to help stabilize communities hard hit by foreclosures.

A policy-relevant research agenda

THE REO INVENTORY

- A study assessing the conditions of REO stock in a sample of markets and how much rehabilitation work the houses are likely to require. The study also should explore the degree to which servicers are maintaining or rehabbing the properties and assess whether existing code enforcement practices can adequately address the problems of the REO stock.
- A study identifying the degree to which local land-use practices and regulations hinder efforts to sell and redevelop REO properties, perhaps because owners are restricted from demolishing existing buildings that are highly costly to repair and/or from assembling parcels to build larger homes or multifamily buildings.
- A study analyzing who is buying REO properties, how much they are investing in them, and how quickly they are reselling them. The study would try to identify whether speculators are buying REO properties and flipping them without improving conditions. The study would distinguish between owners making bulk purchases of REO properties and those buying individual properties.

THE ROLE OF REGULATION IN PREVENTING FUTURE CRISES

- A study identifying the land-use practices that have most successfully buffered communities from housing price declines, foreclosures, and vacancies. The study would examine, for example, whether areas with growth management policies have lower rates of excess housing inventory and price depreciation, or whether certain development forms (such as low-density, single-use subdivisions far from job centers, or homeowners associations) have a different prevalence of foreclosures or REO properties.
- A study to assess what investments other than housing (such as infrastructure, crime control, public transit, or school construction) have been associated with lower housing price declines, foreclosures, and vacancies.
- A study to assess the relative effectiveness and costs of different approaches to community stabilization, such as tax lien and land banking programs.

Continues to Decline,” <http://www.corelogic.com/about-us/news/corelogic-reports-shadow-inventory-continues-to-decline.aspx>, accessed November 28, 2011).

Rental Housing

What do we know, and what do we need to know?

The housing crisis also points to a need for new thinking on rental housing policy. We know that demand for rental units initially fell during the downturn but is now recovering. Some analysts remain concerned that many owners of rental properties may be over-leveraged and financially stressed, but we know little about what actually happens to buildings—and their tenants—when this occurs. To what extent are owners cutting back on maintenance as they try to cover their mortgage payments?

What kinds of programs can help to ensure the continued stability of over-leveraged buildings and ensure that tenants are not displaced? The crisis has also highlighted weaknesses in local code enforcement policies and efforts to encourage the maintenance and preservation of multifamily housing. Federal, state, and local housing agencies may want to improve systems to monitor property conditions, to reform housing code enforcement, and to bolster preservation efforts to ensure that multifamily rental properties are well-maintained, even in weak markets.

Policymakers also may want to pay close attention to the conversion of surplus single-family homes built for homeownership to rental properties. As noted above, data from the American Housing Survey suggests that a growing number of households are renting single-family homes, and anecdotal evidence suggests a growing number of private investors are buying up single-family homes and plan to operate them as rental properties for many years.⁵ But we know little about these owners and how much they are investing in maintenance and improvements. We know little about who is living in these homes, and whether they plan to stay there for an extended period. Finally, we know little about how surrounding neighborhoods are affected by these conversions. Policymakers will need to examine whether new regulations will be needed to monitor or support the management of these properties, and policymakers will need to assess whether the government should try to get more properties in the hands of nonprofits that will maintain them as affordable rentals, even as the market rebounds. Finally, government may want to adjust housing codes to make it easier for households to share housing.

A policy-relevant research agenda

SINGLE-FAMILY RENTAL PROPERTIES

- A study of the owners of single-family rental properties: who they are (large, professional investors, small investors who manage a few properties, or households who are landlords by default because they cannot sell their homes); how long they have held the properties; what their business model is; how they are financed; what the economics of their rentals are; how they manage the properties, etc.
- A study of the tenants who live in single-family rentals. Researchers could use the AHS and/or the ACS to describe the characteristics of households who move into these homes. In future years, researchers could study the housing trajectories of these renter households and learn whether they stay in these single-family homes for extended periods.
- A study analyzing how conversions of single-family homes are affecting surrounding neighborhoods—property values, crime rates, etc. Research could use local administrative data sources for neighborhood outcomes as well as records maintained in some local jurisdictions that identify whether a home is rented or owned.

⁵ Robbie Whelan, “Big Money Gets into the Landlord Game,” *Wall Street Journal*, August 4, 2011.

MULTIFAMILY RENTAL PROPERTIES

- A study of owners of small and larger multifamily properties in different markets to assess the financial health of their properties. The study would describe how the downturn is affecting income and expenses. Researchers could use an enhanced sample of HUD's Rental Housing Finance Survey in selected metropolitan areas.
- Case studies of distressed, multifamily developments to examine what happens to the building and the tenants over time. The studies would explore different approaches to protecting tenants in such vulnerable buildings.

Increasing Poverty Coupled with Persistently High Income Inequality and Volatility

The Challenge

Recent reports from the Census Bureau reveal that 46.2 million people lived in poverty in 2010, an increase of almost 6 percent over 2009, and the fourth consecutive annual increase. The number of those living in poverty is larger than it has been in the 52 years for which poverty estimates have been published.⁶ That increase is accompanied by disturbing levels of both income inequality and income volatility. Both are believed to have risen since the 1970s, and the latest recession may have compounded those trends. The combination of increased poverty and persistently high levels of income inequality and income volatility may have significant, though different, implications for the housing market. The growing number of people living in poverty, coupled with increasing wealth for households at the high end of the income distribution, may place upward pressure on rents and prices (Matlack and Vigdor 2006), worsening the housing affordability challenges of moderate- and lower- income households. Recent research has shown the increasing income inequality has been accompanied by increased residential sorting by income, and to a decrease in both mixed-income and middle-income neighborhoods (Reardon and Bischoff 2011). That trend may make it even more difficult for housing policymakers to provide housing assistance that helps families find affordable housing in neighborhoods of opportunity. Further, high levels of income volatility for the growing number of households at the low end of the distribution may make it especially difficult for low- and moderate-income households (who typically devote a larger percentage of their income to housing costs than higher-income households, and who generally have fewer savings to fall back on to weather income shocks) to stay stably housed. Such volatility may lead to lower rates of homeownership (Diaz-Serrano 2004; Haurin 1991), greater risk of default (Diaz-Serrano 2004; Hacker and Jacobs 2008), housing instability, and higher rates of homelessness (O'Flaherty 2010). Our housing policies may require substantial adjustment to address the combination of growing poverty and persistently high (and likely increasing) income inequality and volatility.

Increasing poverty

Poor households perpetually struggle to find suitable housing, and as the number of poor increase, the struggle gets even harder. As of 2009, 10.1 million renters—one of every four—were paying more than 50 percent of their income for housing (Joint Center for Housing Studies 2011b). The burdens facing households with extremely low incomes (ELI) (those making less than 30 percent of area median

⁶ U.S. Census Bureau, "Poverty: Highlights," <http://www.census.gov/hhes/www/poverty/about/overview/index.html> (accessed September 23, 2011).

income) or very low incomes (those making less than 50 percent of area median income) are enormous: of the households in the bottom quintile of the income distribution, 61.4 percent are paying more than 50 percent of their income on housing, and another 20 percent are paying between 30 and 50 percent (Joint Center for Housing Studies 2011b). While the number of households living in poverty increased, the number of rental units available for ELI households fell substantially in recent years (Eggers and Moumen 2011). Indeed, by 2009, there were 10.4 million ELI renter households, but only 3.7 million rental units of adequate quality that were available and affordable to those households, leaving a gap of 6.8 million units (Joint Center for Housing Studies 2011b).

In times of decreasing government resources, the outlook for additional housing targeted toward low- and moderate-income households, especially ELI households, is bleak. While HUD's budgetary outlays increased by \$19 billion from 2006 to 2009, outlays have decreased since then and are expected to decrease further in 2012.⁷

Income inequality

Most experts believe that over the 20th century, trends in inequality have followed a U-shaped pattern: the income share of the top decile was around 45 percent from the 1920s to 1940, then declined to about 33 percent by the end of the 1940s and remained at that level until the 1970s, when it began to rise.⁸ In 2007, income inequality was the highest it had been since 1916, with the income share of the top decile rising to 49.7 percent (Bradbury and Katz 2002; Cashell 2005; CIA 2010; Hungerford 2009; Saez 2010).⁹ The Congressional Budget Office (CBO) recently reported that the average real after-tax household income of the top 1 percent of families grew by 275 percent between 1979 and 2007. In contrast, for the 20 percent of the population with the lowest income, average real after-tax household income was only about 18 percent higher in 2007 than it had been in 1979 (CBO 2011). While it is too early to discern exactly how the recession will affect income inequality, there is reason to fear that the effects of widespread joblessness will exacerbate it (Chakrabarti et al. 2011; Pew Research Center 2010).

Increasing inequality may intensify the policy challenges of housing poor households in at least two ways. First, in tight housing markets, if housing is relatively undifferentiated, increasing the income of the wealthy will drive housing prices up for the poor (Matlack and Vigdor 2006).¹⁰ So-called "superstar" cities, for example, where households compete for scarce land, see greater increases in housing prices as income inequality rises than cities with more elastic markets (Gyourko, Mayer, and Sinai 2006).¹¹

⁷ U.S. Office of Management and Budget (OMB), *Historical Tables*, "Table 4.1—Outlays by Agency: 1962–2016" (Washington, DC: OMB, 2011).

⁸ There is some dissent from this general consensus, driven largely by differences in the datasets used and in the definition of income. See, for example, Kitov (2007); Kopczuk and Saez (2004); and Reynolds (2007). There also are philosophical differences over whether income is an appropriate proxy for economic well-being. See, for example, Cashell (2005); Johnson, Smeeding, and Torrey (2005); Lindsey (2009); and Meyer and Sullivan (2007).

⁹ See also Economic Policy Institute, "Income Inequality," <http://stateofworkingamerica.org/inequality/income-inequality/>. There are a number of differing theories about the causes of increased income inequality: changes in technology, trade liberalization, retreat of institutions developed in the New Deal and World War II, increased immigration, globalization, the decline of unions, the entry of women into the workforce, and decreases in the real value of the minimum wage. See, for example, Cashell (2005) (discussing trade liberalization); Gottschalk and Moffit (2009) (asserting that growing rates of income inequality are partially a result of growing income instability); and Lindsey (2009) (providing an overview of the prevailing theories, in addition to his own theories about changes in certain economic policies and social norms).

¹⁰ If housing is differentiated, raising the income of the rich may reduce demand for the type of housing typically chosen by poorer consumers, thus lowering the price of cheap housing (Matlack and Vigdor 2006).

¹¹ Those increases may be offset, at least in part, by wage premiums for workers needed in the city.

Second, to the extent that increasing inequality leads to increased income segregation, “the isolation of the rich may lead to lower public and private investments in resources, services, and amenities that benefit large shares of the population, such as schools, parks, and public services” (Reardon and Bischoff 2011, 22–23), so the poor neighborhoods in which affordable housing is likely to be located will be even less able to provide residents with opportunities to improve their lives.

Income volatility

Many researchers assert that income volatility rose sharply in the late 1970s and early 1980s, stayed at high but relatively stable levels during the 1990s, and now may be increasing again (Dynan, Elmendorf, and Sichel 2007; Gosselin and Zimmerman 2008; Gottschalk and Moffitt 2009; Hacker and Jacobs 2008; Hacker et al. 2010; Hertz 2007; Splinter, Bryant, and Diamond 2010). Some dissent from this view, however, including a CBO analysis finding that the trend in year-to-year earnings variability was “roughly flat” during the 1980s and 1990s (Dahl, DeLeire, and Schwabish 2007, 3).¹² The different conclusions are driven largely by use of different data and various definitions of income (Dynan et al. 2007; Gosselin and Zimmerman 2008; Hacker and Jacobs 2008). Notwithstanding disagreements over recent trends in volatility, however, there is a general consensus that incomes are quite volatile (Dahl et al. 2007). According to the CBO, between 2001 and 2002, about one in five workers had their earnings fall by more than 25 percent, and about one in seven saw their earnings fall by more than 50 percent. Roughly the same fraction of workers experienced a rise in income (Dahl et al. 2007).

Income volatility is a blunt measure of economic risk for families (Dynan et al. 2007; Gosselin and Zimmerman 2008). Income variability may reflect involuntary job loss and wage cuts, but it may also reflect voluntary choices to obtain more education or spend more time with one’s family (Dynan et al. 2007). Further, risk can both arise from and be buffered by various changes besides income variations. The effect of shocks on housing may be moderated, for example, by decisions to form larger households (delaying a young adult’s departure, or moving grandparents back in) or to cut back on the size or other characteristics of the housing in ways that do little to diminish well-being. Even volatility that is voluntary or buffered by household responses may pose challenges to housing policymakers, but the challenges may differ depending upon the nature of the economic risk the volatility poses or upon the household’s circumstances.

Shocks to income also can be buffered to some extent by adjustments to saving and borrowing, thereby reducing their impact on consumption (Dynan et al. 2007), but a dearth of personal savings and substantial household debt leave many households especially vulnerable to income volatility today. The personal savings rate fell from an average of 9.1 percent in the 1980s to an average of 1.4 percent in 2005. While the saving rate has trended upward since then, the personal saving rate is still less than it was in the 1980s (McCully 2011). From November 2009 to January 2011, more individuals reported having withdrawn funds from non-retirement savings accounts than having added funds to them (Chakrabarti et al. 2011). From 1980 to 2006, household debt as a percentage of aggregate personal income rose from less than 60 percent to over 100 percent, so by 2006, aggregate debt was nearly 120 percent of aggregate income (Dynan and Kohn 2007). Household debt is also high in absolute terms, and, although it peaked in 2008, the aggregate consumer debt balance at the close of the third quarter

¹² CBO’s analysis uses the Social Security Administration’s Continuous Work History Sample and longitudinal family income data from the Survey of Income and Program Participation from 1980 to 2003. CBO estimates that income volatility, measured by the percentage of workers experiencing a given change in income, increased from 2000 to 2003. But when measured by the standard deviation of the one-year change in inflation-adjusted earnings, the CBO report finds that income volatility actually decreased during that time (Dahl et al. 2007).

of 2010 was \$11.6 trillion, compared with the \$4.6 trillion owed in the first quarter of 1999 (Brown et al. 2010).

Certain segments of the American population are particularly vulnerable to income volatility: the poor, especially those who have ever received welfare (Batchelder 2003); blacks and Hispanics (Hacker et al. 2010); high school dropouts (Batchelder 2003); single-parent households (Hacker et al. 2010); and residents of New York, Georgia, Florida, Texas, New Mexico, Arizona, and California (Hertz 2007).

Income volatility has important implications for both the housing market generally and for the poor. Put simply, income volatility makes it more difficult to both achieve and sustain homeownership (Diaz-Serrano 2004; Haurin 1991). Several researchers maintain that rising income volatility contributed to the recent home mortgage foreclosure problem as households were unable to make mortgage payments and may have taken equity out of their homes to manage their living expenses (Hacker and Jacobs 2008).

For the poor, high levels of income volatility may make it especially difficult for households to remain stably housed. Brendan O’Flaherty observes that more volatile income is associated with a greater probability of becoming homeless, and he argues that because it is often unpredictable shocks that drive people into homelessness, reducing income volatility may reduce homelessness more effectively than just raising income: “Smoothing may work better than uplifting” (O’Flaherty 2010, 144). Reducing income volatility may be especially necessary because policymakers have found it very difficult to predict which households will become homeless (Shinn, Baumohl, and Hopper 2001).

The challenges of housing families in the face of increasing poverty coupled with high levels of income inequality and volatility may require refinements in various housing policies. First, given the fiscal pressures federal, state, and local governments are facing, the amount of funding for housing assistance may be unable to keep pace with the increasing number of poor households. To help more poor households, it may be necessary to give smaller amounts of assistance to more people or to limit the period during which a particular household can rely upon assistance to allow others to obtain benefits. Further, the voucher program and other assisted housing programs may require reform to better meet the needs of low-income households that are especially at risk of income volatility. Existing homeownership programs may need to be revamped, to require (for example) escrow accounts to help cushion income shocks or to help to ease transaction costs of selling unexpectedly. Homelessness prevention programs may need to be revised to account for the problem of income volatility (by, for example, providing loans to people experiencing income shocks or unexpected expenses). Land-use regulatory schemes may require greater scrutiny because, as low-income households increasingly struggle with housing cost burdens, governments may need to experiment with ways to reduce the cost of building or rehabilitating safe and sound housing or converting buildings with other uses to housing. But to adjust housing policies to account for the challenge of housing increasing numbers of poor households in the face of high levels of income inequality and volatility, we need to know much more about how those phenomena are affecting low-income families and how they influence those who supply housing for low-income households.

Critical Research Questions for Policy

Rental housing assistance and homeownership assistance programs

What do we know, and what do we need to know?

Eggers and Moumen (2011) and the Joint Center for Housing Studies (2011b) each have provided detailed analyses of the trends in the housing cost burdens of low-income households and the availability of affordable housing nationally. We know little, however, about how the demand for housing vouchers and other rental subsidies is changing as a result of those trends and the recent economic downturn or economic instability more generally. We know little about the characteristics of households seeking subsidized rental housing, or about how households who do not seek assistance manage to meet their housing needs (Wood, Turnham, and Mills 2008). We need to know more about how those households that receive rental or homeownership assistance use the assistance (the length or repetition of renter households' use of vouchers, for example, as well as their history of eviction or difficulties finding landlords to accept them). On the homeownership side, we do not know enough about how low- and moderate-income homeowners manage volatility successfully.

A policy-relevant research agenda

THE EFFECT OF INCREASING POVERTY, INEQUALITY, AND VOLATILITY ON HOUSING NEEDS

- Analysis of users of and applicants for rental housing subsidies to determine the characteristics of those households and how the characteristics have changed in recent years, how the length or repetition of the use of rental housing subsidies has changed, and how households' choices about housing assistance (such as the neighborhoods in which to use their vouchers) have changed. It would be helpful to know, for example, how recipients were housed before they received assistance, and how they are housed after assistance ends. Through surveys or analysis of existing tenant-level data, researchers could provide a profile of current users and their usage patterns that would allow policymakers to more accurately assess how successful rental housing assistance programs are in getting people to better housing and neighborhoods and to evaluate how programs and policies could be refined to better meet the needs of households currently seeking or using housing assistance.
- Analysis of how low-income households manage to cover housing costs, especially in high-cost metropolitan areas, using financial diaries and interviews. Researchers could examine what other expenditures those households sacrifice to meet their housing costs, how they find housing, how they choose between renting and owning, what changes in household composition they make to address housing needs, and how often they move (voluntarily or involuntarily). The results would provide information about how policymakers can best help households at the low end of the income distribution who manage to find housing despite their low (and volatile) incomes, and how to help households who cannot manage to do so by showing them how to adopt similar strategies or patterns of resilience.

DEVELOPING MORE COST-EFFECTIVE HOUSING ASSISTANCE AND HOUSING TYPES

- A study comparing the benefits delivered by and the cost-effectiveness of different types of place-based assisted housing and tenant-based subsidies, testing how differences vary across local markets. The study would consider whether place-based housing programs deliver benefits in terms of service coordination and neighborhood revitalization in some settings. The results might suggest potential ways to reduce costs and improve effectiveness.

- A study analyzing the administration of a set of local voucher programs to learn if certain administrative strategies can help to improve voucher usage and success rates, especially in tight market areas.
- Experimental analyses of pilot programs that offer rental subsidies of more limited size or duration than the current voucher program. The results would suggest potential ways to spread resources across a greater number of needy households.
- Analysis of the illegal or improvised rental housing market to determine how many people live in crowded units that do not satisfy relevant housing codes, apartments or hotels that rent by the week (in part perhaps due to limited cash flow or other considerations), or in other makeshift housing arrangements (such as sharing rooms with strangers). What are the most cost-effective approaches to bringing dangerous illegal units up to code and to providing housing models that meet the housing needs that illegal or improvised arrangements are filling?
- Analysis of how the housing market could better address the risks of income volatility or economic risks more generally, by providing longer-term leases, offering renter's insurance or renter escrow accounts, or making shared housing arrangements more feasible. For example, research could assess the potential of a rental insurance program to help address income volatility and pilot-test a program to evaluate its cost and success in helping households remain stably housed. Research might also pilot-test alternative renters' savings programs that would encourage savings among lower-income households to help renters build equity and weather income shocks.
- An analysis of the effects of differences across states in anti-eviction protections. It might also look at the extent to which one-time payments work for eviction protections (the earned income tax credit (EITC) may be used to pay off rent arrears, and it would be useful to know if the families who used EITC to pay off rent arrears were better able to stay housed despite income fluctuations than other families).
- Pilot projects to test tools to help homeowners weather income volatility, such as escrow accounts, shared equity models, and shared housing arrangements (such as offering payments to households that take in needy relatives), could help policymakers better tailor low income homeownership programs.
- Analysis of how much the volatility of tenants' incomes costs landlords in terms of turnover and unpaid rent, and how those costs factor into owners' decisions to provide and maintain lower-cost housing. The analysis would examine, for example, whether landlords delay evicting tenants who are behind on rent when the tenant's delinquency results from a sudden change in income, and under what circumstances landlords could be persuaded to do so. Such an analysis could suggest reforms in housing assistance programs to reduce landlords' risks, and it might suggest programs to help bridge tenants' rent payments when their incomes change suddenly.

Homelessness

What do we know, and what do we need to know?

We know that income shocks contribute to households' propensity to become homeless. We need to learn more, however, about how to identify those households at risk of becoming homeless because of income shocks and about how best to target those households for assistance. We need to know more about what kinds of assistance (in addition to the rental and homeownership assistance discussed above)—such as short-term loans or grants, and assistance in locating housing and paying the moving costs and security deposits needed for the move—are most cost-effective.

Further, while communities around the nation are experimenting with ways to prevent and address some of the unpredictable shocks to income that may lead to homelessness, we need to know more about how cost-effective those programs are. New York City's Homebase program, for example, attempts to prevent homelessness by providing households at risk with referrals to job training, entitlements advocacy, assistance with legal action, housing relocation, and, in select cases, financial assistance for the payment of rent arrears or broker's fees.¹³ Many features of the Homebase approach were incorporated in the Homeless Emergency Assistance and Rapid Transition to Housing Act (HUD 2009).

A policy-relevant research agenda

- Analysis of the characteristics of the households that manage to withstand income shocks versus those that do not, and what this implies about how to target households at risk of becoming homeless because of income shocks and how to help them to stay in their homes.
- Identify and evaluate innovative practices (in addition to the Homebase program) that provide assistance designed to keep households at risk of homelessness from having to resort to shelters (by providing emergency loans or grants for rent payments, for example), to assess what interventions can be most effective in helping households weather income shocks.
- Analysis of tenant evictions to better understand the conditions under which tenants receive eviction notices and the aftermath of those notices. The study would identify the types of help (legal counseling, anti-foreclosure counseling, mobility counseling, homelessness assistance, assertion of defenses in housing court, legal protection such as just cause or anti-retaliation statutes) to which different kinds of tenants resort when they receive eviction notices and assess the effectiveness of those types of assistance.

Land-Use and Other Regulatory Schemes

What do we know, and what do we need to know?

A myriad of studies have shown how various regulations and regulatory systems, from building codes to growth management schemes, raise the cost of housing (Euchner 2003; Quigley and Raphael 2005; Salama, Schill, and Stark 2005) and reduce the likelihood that new construction could be supported by the rents that low-income households could afford. While we know less about the benefits those regulations or regulatory systems may be providing, there is general consensus that the regulations (and their implementation and enforcement) could at the very least be made much more efficient. Many state and local experiments have been held out as best practices, but evaluation of the actual cost savings or other effects from the experiments is sparse. To focus efforts on the most promising options for reducing costs of construction, maintenance, or operation to make new and rehabbed housing more affordable for a range of households, more objective and comprehensive analysis of the costs and benefits of regulatory reforms is needed. In addition, we need to know more about how regulations affect the ongoing cost of operating and maintaining housing. Some work is under way to better understand the effect various regulatory schemes have on operating costs in connection with efforts to make buildings more energy efficient, but more needs to be done to understand how regulations and the decisions they foster at the design and construction phase affect the long-term costs of operating the building (for owners and residents).

¹³ See New York City Department of Homeless Services, "Homebase," <http://www.nyc.gov/html/dhs/html/atrisk/homebase.shtml> (accessed November 28, 2011).

A policy-relevant research agenda

- Analysis of best practices to create less expensive housing units, like single room occupancy units (SROs) and accessory apartments, to determine, for example, whether modifications to building and housing codes or other regulatory systems, streamlined permitting procedures, or other efforts to reduce impediments to such units would reduce the costs of construction or rehabilitation without undue sacrifice of any benefits the regulations secure. Pilot projects to better understand the costs of particular regulatory systems or types of regulations and to compare the effectiveness of alternative ways of reducing those costs would provide objective measures to help prioritize reform efforts.
- Assessment of regulatory and other barriers to shared housing (such as occupancy codes), and analysis of alternative reforms that would allow developers to design new or rehabbed housing that offers shared living arrangements.
- More generally, pilot projects to rigorously quantify the cost-savings possible through various regulatory reforms, as well as an analysis of any benefits lost through the reforms, are necessary to prioritize reform efforts to reduce the cost of building and operating both subsidized and market rate housing.
- Assessment of the circumstances under which state and local governments have reformed or eliminated inefficient regulations, and analysis of how to foster the climate in which reforms are possible. The economic downturn led some jurisdictions to roll back impact fees, growth controls, and other regulations in order to encourage development. An analysis of the costs and benefits of those reforms, and an assessment of what factors contribute to successful reforms, could help federal, state, and local governments, as well as developers and advocates, shape regulatory reform efforts.

Persistent Concentration of Poor and Minority Households in Low-Quality Housing and Low-Opportunity Neighborhoods

The Challenge

The latest Census shows that our cities and metropolitan areas continue to be highly segregated along racial and economic lines. In 2010, the average metropolitan area had a black-white dissimilarity index of 55,¹⁴ suggesting that, on average, 55 percent of black households would have to move to a new neighborhood to achieve perfect integration. This was down only slightly from 2000, when the average dissimilarity index was 58.4 for U.S. metropolitan areas. Hispanic and Asian households are less segregated than black households, but their segregation levels have been holding fairly steady since 1990.

Meanwhile, many poor households (especially poor minority households) live in neighborhoods with extremely high poverty levels. While Jargowsky (2003) reports that poverty concentration declined

¹⁴ See William Frey, "New Racial Segregation Measures for Large Metropolitan Areas: Analysis of the 1990–2010 Decennial Censuses," <http://www.psc.isr.umich.edu/dis/census/segregation2010.html>.

during the 1990s,¹⁵ Pendall and his colleagues find that it increased substantially over the past decade, so about one in 11 residents of metropolitan areas, or 22.3 million people, now live in a neighborhood where 30 percent or more live in poverty (Pendall, Davies, et al. 2011). Kingsley and Pettit (2003) focus on poor children and offer an even more troubling assessment, finding that 30 percent of poor children lived in neighborhoods with poverty rates of 30 percent or higher in 2000. It seems likely that this share is still higher today.

Significantly, racial and economic segregation in the United States have not created separate-but-equal neighborhoods. Poor and minority households are much more likely than other households to live in neighborhoods with higher crime, worse schools, less access to healthy food options, and, often, inferior access to jobs (Cashin 2004; Massey and Denton 1993; Patillo 2005). Over one-quarter of black children in 2005 lived in families that complained of multiple problems with their neighborhood, compared with 15.8 percent of Hispanic children and 13.8 percent of white children (Holupka and Newman 2011). While neighborhood environment may not matter as much as family background, there is still considerable evidence that neighborhood environments shape the health, attitudes, and life chances of children and families (Ellen and Turner 1997; Ludwig et al. 2011).

Lower-income households also tend to live in lower-quality housing. Although the physical quality of housing in the United States has generally improved over the past 50 years, many lower-income households still live in homes with unreliable heating systems, vermin, and lead paint. In 2009, researchers at HUD estimated that 581,000 very low income households rented housing units that were deemed “severely inadequate,” defined as having one or more serious physical problems related to heating, plumbing, electrical systems, or maintenance (Steffen et al. 2011). Another 463,000 lived in overcrowded housing units—those with more than one person per room (Steffen et al. 2011). Focusing on children, Holupka and Newman (2011) estimate that roughly 2 million poor children lived in physically inadequate dwellings in 2005, while 1.5 million lived in overcrowded housing. The authors also show that minority children disproportionately face housing problems. Nearly 10 percent of black children and 8.5 percent of Hispanic children lived in physically inadequate dwellings, compared with just 3.9 percent of white children (Holupka and Newman 2011). The differences by race and ethnicity are even more striking for crowding, with 28 percent of Hispanic children living in overcrowded units, compared with 10.8 percent of black children and just 4.5 percent of whites (Holupka and Newman 2011).

We have little rigorous research on the consequences of these quality deficiencies, though there are good studies documenting the deleterious effects of a few individual conditions. Specifically, lead paint in “older homes” is the “single major source” of exposure of children to the risks and effects of lead poisoning (Needleman 2004, 219). Research shows that lead poisoning is associated with developmental delays and poor educational outcomes (Lanphear et al. 2000; Needleman 2004). Poor heating systems and lower quality housing conditions can also lead to health problems like asthma. As reported by the Centers for Disease Control, asthma is one of the leading causes of absences from school, which in turn can lead to poor educational outcomes.

Policy debates about segregation and racial and economic differences in neighborhood quality often turn on the extent to which lower-income and minority households are making unfettered residential

¹⁵ Kingsley and Pettit (2003) show that the share of poor households living in census tracts with poverty rates between 30 and 40 percent was actually constant during the 1990s, suggesting the only real decline was the number of poor households living in tracts that had poverty rates of 40 percent or higher.

choices. Those on the left charge that choices are highly constrained by discrimination, and those on the right typically deny the significance of such discrimination. The new Housing Discrimination Study that the Urban Institute is currently undertaking will shed considerable light on the extent of ongoing, contemporary discrimination. But the evidence from the Urban Institute's 2000 discrimination study suggests that while discrimination persists and constrains housing choices, minority households don't face the same outright denials that they did a few decades ago (Turner and Rawlings 2009). So, while their choices may be highly constrained, people—even those with very low incomes—often have some choice about the housing units they live in. Thus, it is critical for policymakers to understand much more about how and why households make the residential choices that they do. They need to know the extent to which the demand for housing units and neighborhoods is limited by information gaps, shaped or constrained by the current nature of economic and racial segregation, affected by realtor behavior, and/or responsive to policies and incentives. They need to learn the extent to which “decision fatigue” plays a role in poor households' concentration in lower-opportunity areas (Spears 2010).¹⁶ Finally, they need to identify strategies that can “nudge” households to higher-quality housing and neighborhoods that offer richer opportunities.

There is much to learn about the supply of housing too. Policymakers need to understand more about how developers make decisions. Specifically, they need to learn more about the incentives that drive them to supply affordable housing, and specifically Low Income Housing Tax Credit housing, in different kinds of neighborhoods. What barriers or constraints, if any, do developers face in supplying housing in such communities? Are there policy levers that could help encourage developers of affordable housing to target high-opportunity neighborhoods? In addition, policymakers need to understand the incentives facing owners and managers to maintain existing housing and to preserve the affordability of subsidized housing at the end of its subsidy period.

Critical Research Questions for Policy

Housing Choice Voucher Program

What do we know, and what do we need to know?

Understanding more about how households and landlords make decisions will shed important light on ways to better encourage integration and access to higher opportunity neighborhoods. One key policy lever is the Housing Choice Voucher (HCV) Program, which is designed explicitly to give low-income residents maximum choice about their housing and neighborhoods. Despite this goal, research continues to show that most voucher holders settle in units close to their original housing, and many end up in high-poverty areas that are not well-served by public schools (Ellen and Horn 2011; Galvez 2010). Galvez (2011) reports that 16 percent of metropolitan voucher holders in 2004 (over 250,000 households) lived in the most distressed tracts in their respective metropolitan areas.

In short, many voucher holders are not moving into high-opportunity neighborhoods, even when their vouchers would theoretically enable them to do so. Studies have shown that housing units with rents below the fair-market rent (FMR) are available in most high-income neighborhoods, but few voucher holders are reaching them (Devine et al. 2003). But while research highlights this gap in access, it does not explain why it exists.

¹⁶ See also John Tierney, “Do You Suffer from Decision Fatigue?” *New York Times Magazine*, August 17, 2011.

It is possible that voucher holders are making informed choices to stay closer to social networks or to spend less on housing to allow them more funds for other key expenses. But there are other, more troubling possibilities too, such as a scarcity of landlords in higher-opportunity areas willing to rent to voucher holders. Some preliminary research suggests that voucher holders gain access to a broader set of neighborhoods in jurisdictions with laws banning source-of-income discrimination or discrimination against voucher holders (Galvez 2011). But it is possible that the presence or absence of antidiscrimination laws reflects other, unobserved differences across jurisdictions. More generally, we understand little about what landlords know (or think they know) about voucher programs, or about which strategies could encourage landlords to accept vouchers. We do not know the extent to which the program's administrative requirements and burdens (such as housing quality inspections) are a barrier and what administrative reforms might make the program more attractive.

Another possibility is that tenants do not have information about housing options in higher-opportunity areas or experience in negotiating with brokers and landlords. Research suggests that counseling can help voucher holders reach better neighborhoods (Cunningham and Sawyer 2005; Shroder 2003), but little work has studied the efficacy of different counseling approaches (Cunningham et al. 2010). And there is little work examining the effect of simply providing information to voucher holders, though some studies have found that existing affirmative marketing programs are not effective (Roisman 2001–02). A key question for policymakers is whether voucher holders would make different choices if provided with more and different information. How much can information, the framing of choices, or counseling programs improve the housing outcomes of voucher holders? How could developers of subsidized housing or owners of housing in higher opportunity neighborhoods to which voucher holders might be interested in moving be encouraged to develop or undertake more effective marketing campaigns or outreach?

Armed with a better understanding of why voucher recipients are not reaching better neighborhoods, HUD might adjust the voucher program, such as designing new ways of providing information to recipients about housing and neighborhood options or making program administration less burdensome for landlords.

A policy-relevant research agenda

- Experimental analyses to determine whether presenting voucher households with different forms of framing information about the conditions of buildings and neighborhoods and the quality of local services (such as schools) could cause households to change their residential choices. The study could also test the impact of counseling assistance on top of building and neighborhood information.
- Surveys of landlords to learn what they see as the costs and benefits of participating in the voucher program. Such a study could shed light on what owners see as the barriers to participation and hopefully suggest new initiatives that would expand the pool of landlords who accept vouchers.
- Quasi-experimental analyses comparing the quality/conditions of the neighborhoods reached by voucher holders with those of the neighborhoods reached by other comparable households. For example, researchers might compare changes in the neighborhoods and housing units lived in by households on the waiting list for vouchers to test whether voucher holders are improving their housing and neighborhood outcomes in different jurisdictions. Researchers would explore whether changes in voucher program administration adopted by certain jurisdictions are correlated with changes in neighborhood access for voucher holders of different races. Researchers might specifically test whether voucher holders that receive vouchers from state housing agencies rather

than local housing authorities reach different neighborhoods to test whether regionalization of programs helps improve outcomes.

Siting of place-based housing

What do we know, and what do we need to know?

The siting of place-based housing has implications for segregation and access to opportunity as well. Ample research shows that tenants living in traditional public housing disproportionately live in high-poverty neighborhoods that offer relatively poor local services (Ellen and Horn 2011; Goering, Kamely, and Richardson 1997; Newman and Schnare 1997). Public housing is highly concentrated as well: public housing units were located in just 8 percent of neighborhoods in 2000, compared with 83 percent for voucher holders (Devine et al. 2003). However, these results do not necessarily hold for all jurisdictions. In King County, Washington, Reece and colleagues (2010) found that in 2008 a larger share of public housing units was in high-opportunity neighborhoods than voucher holders (21 percent of public housing units, compared with 14 percent of voucher holders).

On average, LIHTC unit residents live in lower-poverty neighborhoods than public housing residents (Ellen, O'Regan, and Voicu 2009; McClure 2006). Indeed, the typical LIHTC unit in 2004 was located in a tract with a 20 percent poverty rate, nearly identical to average neighborhood poverty rate for HCV households. In addition, average neighborhood quality was identical for LIHTC units and HCV households based on a five-measure distress index (Galvez 2010). However, Lens, Ellen, and O'Regan (2011) find that tax credit tenants live in higher crime areas than voucher holders.

While researchers have documented such average disparities, we understand little about their roots. Studies of developer decisionmaking can critically inform strategies to encourage the development and preservation of assisted housing in high-opportunity neighborhoods. Policymakers would benefit from a more rigorous and systematic analysis of the trade-offs involved in building subsidized housing in high-opportunity neighborhoods. Policymakers also need to understand more about what it takes to improve neighborhoods and how they can better coordinate their investments in particular communities, though these issues are covered in a companion paper.

A policy-relevant research agenda

- A study of the barriers or constraints, if any, faced by developers in building LIHTC housing developments in high-opportunity areas. The study would identify whether development costs are higher in higher-opportunity areas because of regulatory barriers. Researchers could interview developers to learn about incentives they face because of local, state, or federal market conditions or policies. These discussions could also suggest policy levers that could help encourage developers of affordable family housing to target high-opportunity neighborhoods.
- A study describing the relative quality of the services and conditions in neighborhoods lived in by tenants in LIHTC housing developments in different jurisdictions. The study would compare neighborhood outcomes across states and explore whether the quality of the neighborhoods and schools reached by LIHTC tenants is associated with goals outlined in the state's Qualified Allocation Plan and specific state policies.
- A study using new LIHTC tenant data to examine how the incomes and racial composition of LIHTC tenants compare with the mix of residents living in the neighborhoods in which developments are sited. The study would shed light on whether the siting of LIHTC developments is furthering or mitigating racial and economic segregation.

- A study exploring whether and how the coordination of services in subsidized housing developments can help to offset some of the negative outcomes associated with living in higher-poverty areas and help families and children advance socially and economically. Researchers might explore a few case-study developments but might also more rigorously evaluate demonstration efforts designed to infuse rich services into subsidized housing.
- A study of private owners of LIHTC housing in different markets to probe their motivations for participating in the program, their rental income and operating costs, and their level of investment in maintenance and upgrading of their properties. The study could shed light on the level of subsidy needed to motivate landlords to serve lower-income households in different markets.

Affirmatively furthering racial and economic integration and access to opportunity

What do we know and what do we need to know?

We know that unassisted poor and minority households also disproportionately live in high-poverty neighborhoods that offer relatively poor local services. But we understand little about how households make choices about neighborhoods and whether more and different information, the framing of choices, or the removal of barriers could encourage unassisted households to broaden their horizons and consider a wider set of communities, including those that are more integrated.

We know that racial segregation has declined slightly in recent years, while poverty concentration has increased, but we understand little about why segregation levels have changed so much more rapidly in some areas than in others and whether policies play a role in those changes. We know that racially and economically integrated neighborhoods can be stable over time (Ellen 2000; Krupka 2008), but we understand little about the conditions under which they are more likely to remain stably integrated, or about the policies that can help to encourage stable racial or economic integration. We also understand little about how neighborhoods become integrated in the first place. In the case of neighborhoods that have become more racially integrated, for example, we need a better understanding of whether racial minorities moved into largely white areas or white households moved into largely minority areas.

A better understanding of these underlying patterns and, more fundamentally, of tenant and landlord choices could inform fair housing policies and practices and help HUD monitor how well jurisdictions are meeting their affirmative obligation to further fair housing goals, including their analyses of impediments to fair housing.

A policy-relevant research agenda

- A laboratory-based, randomized experiment testing whether households more generally (not just voucher holders) adjust stated preferences about residential choices when presented with different forms of information about neighborhood services and conditions. With cooperation from housing agencies, researchers might be able to test alternative strategies of providing information in the field as well.
- An evaluation of the services housing counselors provide to renters: what services are being provided; how the services vary by geography, type of provider, and similar factors; how effectively the counseling helps renters to achieve better housing outcomes and neighborhood outcomes.
- Surveys and analyses of housing searches of lower-income households and their location choices to study whether different approaches to housing search might help them reach higher-opportunity areas. The study would also explore the extent to which transit access, social networks, child care

options, or proximity to health care providers or hospitals are driving them to lower opportunity areas.

- A study of affirmative marketing efforts to establish best practices and determine what marketing strategies can draw more diverse applicants to a housing development.
- An analysis of recent changes in segregation using longitudinal geo-coded survey data to analyze how economic and racial segregation have changed since 2000, how the neighborhood choices of poor households have changed during the past few years, and to identify the metropolitan areas in which patterns have changed the most to glean lessons for policy. The analysis would provide important new facts about changing segregation, suggest policies that shape segregation, and recommend new strategies for how government agencies might assess changes in segregation in intercensal years in the future.
- A qualitative study of the residents of racially and/or economically integrated neighborhoods to learn how they experience the diversity of their communities. The study could separately probe the attitudes of households of different races and incomes to learn how they perceive their community, and how they feel that they benefit, if at all, from living in a diverse community.
- An assessment of shifts in the access that poor households have to higher-opportunity neighborhoods, evaluating whether poor households are more likely to end up in lower-opportunity neighborhoods—or vice versa as declining house prices and excess supply create new opportunities in suburban areas—in recent years than they were before the housing market crisis, for example. This project should experiment with different measures of “opportunity,” to glean a richer picture of the neighborhoods that poor households are able to reach. The study should also exploit variation in these trends to identify why these shifts have been more dramatic in certain places and assess whether the variation offers lessons for fair housing policies.
- A study exploring whether income gains in lower-income, minority neighborhoods can lead to stable economic and racial integration. In other words, the study would assess whether gentrification inevitably leads to displacement or can result in stable integration.

Regulations and supply-side incentives

What do we know, and what do we need to know?

Existing research tells us little about whether supplier behavior is constraining the housing and neighborhood choices of lower income households. For existing buildings, we need to understand why so many multifamily buildings have outstanding code violations and why tenants stay there. Are rents not sufficient to cover costs of maintenance and upgrading? Do landlords have market power (in tight markets) that enables them to keep tenants even when building conditions are poor? We need to understand what information tenants use to choose buildings. Do tenants think that poor conditions are a necessary cost of affordable rents? Local housing agencies need to learn more in particular about whether voucher recipients are adequately aware of their opportunities to exit and move to a different unit.

Most fundamentally, we need to know more about how housing quality actually affects individual tenants. A number of studies show a significant association between housing quality and health outcomes, especially in children (Newman 2008). However, the authors are typically unable to make decisive causal inferences, due to measurement issues and concerns about selection (Newman 2008). There is still much more to learn about the consequences of living in poor housing.

In terms of new construction, we need to understand more about the trade-offs involved in building housing in higher-opportunity areas. Is it simply more expensive to build in higher-income areas due to higher land costs? Few have systematically examined the cost differences across neighborhoods or their root causes (e.g., differences in demand vs. regulatory barriers).

Finally, we know little about the types of policies that might encourage landlords to upgrade buildings in lower-income areas and provide lower-rent housing in higher-income areas. We need to learn more about the efficacy of different approaches and the prospects for improvement.

A policy-relevant research agenda

- A study of the relative costs of building housing in high- versus low-opportunity areas. What trade-offs are involved in building housing in neighborhoods that offer richer opportunities for tenants? What financing models or other strategies could be used to offset any higher costs of building in high-opportunity neighborhoods?
- A study of suburban zoning codes and permitting practices to learn how many higher-income suburbs are truly allowing the construction of multifamily housing.
- An analysis of how owners and managers of rental properties make decisions about maintenance and repairs. The analysis should suggest tests of different approaches to encourage investment in rental housing (including owner education, tenant education, subsidies, and alternative models of code enforcement).
- A study to test-pilot efforts to modify code enforcement practices to encourage landlords to invest more in maintaining their buildings. This study could rely on natural experiments that result from real-world policy changes in selected cities or it could initiate an experiment that introduces and tests new approaches.
- A quasi-experimental analysis of the importance of housing quality, exploiting variation in the quality of buildings where households end up after natural disasters or when public housing developments are demolished. While selection may still be a threat to validity, it would be considerably diminished. This study could help shed light on which aspects of housing quality actually matter to individual well-being.

Growing Need for Sustainable and Resilient Buildings and Communities

The Challenge

Climate research has demonstrated that the earth's climate is warming, and that the warming is due in large part to human activity and energy use, although there is some dissent in the scientific community about the nature and extent of the effects we should expect as a result of global warming (Anderegg et al. 2010). There also is growing concern that we are or will be experiencing a greater number of weather-related natural disasters as a result of climate change (see, for example, IPCC 2007).

The need to reduce energy use

The energy use and emissions associated with residential buildings are primarily a function of the need to heat, cool, and light buildings; run appliances; and the vehicle miles traveled (VMT) by residents to and from the building. The energy used to heat, cool, and run residential buildings accounted for approximately 18 percent of U.S. energy use in 2005 (U.S. Energy Information Administration 2005); in

2009, residential buildings were responsible for 22 percent of greenhouse gas emissions in the United States (Jonathan Rose Companies 2011).¹⁷ Energy consumption in different types of residential buildings varies by region, as different regions face different weather patterns, building codes, energy-related behavior, fuel mixes, and equipment needs and sustainability (U.S. Energy Information Administration [EIA] 1995). But all else being equal, except mobile homes,¹⁸ the denser the housing, the less energy is used to heat, cool, and operate the residential building (U.S. EIA 2005). Thus, households living in detached single-family homes consume more energy a year than those living in attached single-family homes, who consume more energy than apartments in two- to four-unit buildings, who consume more energy than apartments in five- or more unit buildings (U.S. EIA 2005). Further, all else being equal, the greater the floor space of the housing unit, the more total energy is consumed by its occupants (U.S. EIA 2005). Households living in older buildings use more energy than those living in newer ones (NAHB 2010), but the energy used in construction, as well as the cost and potential for energy-efficient system upgrades, should also be considered in comparing the energy efficiency of new construction versus rehabilitation.¹⁹ Space heating is responsible for more than half of total household energy use (U.S. EIA 1995), and measures such as combined thermal insulation of buildings and double pane windows can lead to significant reductions in energy use (Balaras et al. 1999). In hotter climates, where space cooling is a greater energy use, the installation of ceiling fans can reduce space cooling load by 70 percent (Balaras et al. 1999).

Generally speaking, the fewer VMT associated with a particular residential building, the lower the greenhouse gas (GHG) emissions and energy consumption associated with the building (which in turn is associated with improved air quality and traffic safety, and lower transportation and infrastructure costs) (Embarq 2011). As with building energy use, VMT are correlated with the density of the housing: the National Housing Transportation Survey found that households in very high density areas (5,000–9,999 households per square mile) produce approximately half the emissions of households in very low density areas (0–50 households per square mile) (U.S. Department of Transportation 2009). Most studies show, however, that increasing density alone does not lessen VMT by a significant amount (Ewing and Cervero 2010; Transportation Research Board 2009; NAHB 2010; Kim and Brownstone 2010). Instead, the association between density and lower VMT and emissions seems to reflect the fact that density often is accompanied by one or more of the other factors that (along with density) are referred to as the “five Ds”: diversity (higher number of different land uses in a given area), design (streetscape characteristics such as smaller average block size, larger proportion of intersections, etc.), destination accessibility (greater ease of access to trip attractions), and distance to transit (shorter distance from residences or workplaces to nearest train station or bus stop) (Litman 2011a; Transportation Research Board 2009).

Most scholars agree that the effect of each “D” by itself is small, but the combined effect of several factors can be large (Bento et al. 2005; Ewing and Cervero 2010; Litman 2011a). Litman argues that doubling all “land use factors” (regional accessibility, density, mix, centeredness, connectivity, roadway design and management, parking supply and management, walking and cycling conditions, transit accessibility, and site design) reduces vehicle travel 20 to 40 percent (Litman 2011a). The Transportation Research Board reviewed existing literature and found that combining several initiatives such as

¹⁷ These figures do not include the vehicle miles traveled by residents to and from the buildings.

¹⁸ Mobile homes consume more energy than units in large apartment buildings but less than units in small apartment buildings.

¹⁹ See Jeff Jamawat, Kris Fortin, Tim Halbur, and Victor Negrete, “Skyscrapers and the World of Tomorrow,” *Planetizen* (September 1, 2011), <http://www.planetizen.com/node/51164>.

significant public transit improvements and mixed uses could have reduce VMT by as much as 25 percent (Transportation Research Board 2009). Bento and his coauthors observed that if the households in their sample were to live in a city with measures of urban form identical to those in Atlanta, average annual VMT per household would be 16,899, but if the same households were to move to New York, the average annual VMT per household would fall to 9,453 (Bento et al. 2005).²⁰

In the 1990s, transit use grew at a faster rate than vehicle use, and per capita vehicle ownership has declined since 2000 (Litman 2011b). Per capita VMT leveled off in 2000, then began declining in 2005, and total VMT began declining in 2007 (Litman 2011b). Those trends may have less to do with improvements in land-use patterns, however, than to such factors as gas prices or unemployment levels.

The need for buildings and land-use patterns that are more resilient to the effects of global climate change

Many experts believe that the United States already has begun experiencing the effects of global climate change, in the form of heavy downpours, rising temperatures and sea level, rapidly retreating glaciers, thawing permafrost, lengthening growing seasons, lengthening ice-free seasons in the ocean and on lakes and rivers, earlier snowmelt, and alterations in river flows (U.S. Global Climate Change Research Program 2009). The effects are expected to grow, and will pose serious challenges for buildings and communities. Coastal cities are particularly vulnerable, and about one-third of the nation's population lives along the U.S. coast.²¹ Inland cities, especially those near rivers and lakes, also are vulnerable, however, if hurricanes increase in frequency and severity (U.S. Global Climate Change Research Program 2009).

Critical Research Questions for Policy

What do we know, and what do we need to know?

We know that there are significant improvements that could be made to existing buildings, as well as in the siting, design, and construction of new buildings, to increase the energy efficiency and resilience of the buildings. We know what many of the necessary improvements in building design and construction are, and have a rough sense of the costs and benefits of making those improvements. Most recent studies surveying the cost of building more energy efficient buildings have found that the construction costs are only slightly higher (Davis Langdon 2007b; Kats 2003; Miller, Spivey, and Florance 2008), and likely will be offset by operating savings or other benefits (Davis Langdon 2007a; Fuerst and McAllister 2008; Jonathan Rose Companies 2011; Turner and Frankel 2008). Further, most researchers conclude that the costs of constructing energy efficient buildings will decline as the industry develops expertise and gains experience with new building technologies and construction methods (Kats 2003). However, the evidence regarding the cost of more energy-efficient buildings is not easily generalizable, especially given the many variables that can affect cost, including building type, project location, local climate, site conditions, and the expertise of the design team (Morris 2007). As for benefits, some studies have shown rental or sales premiums for more energy-efficient buildings, although most studies have involved commercial, rather than residential buildings, and have involved either Energy Star– or LEED–

²⁰ The National Association of Home Builders is a dissenting voice, arguing that the literature shows that the combined effect of density and “the layout of communities” only has a “modest impact” on people’s transportation choices (NAHB 2010). For critiques of the NAHB’s literature review, see, for example, Litman (2011a).

²¹ U.S. Environmental Protection Agency, “Coastal Zones and Sea Level Rise,” <http://www.epa.gov/climatechange/effects/coastal/index.html> (accessed October 3, 2011).

certified buildings rather than energy-efficiency improvements that may be less visible and are not certified (Davis Langdon 2007a [estimates for a theoretical building]; Eichholtz, Kok, and Quigley 2010 [office buildings]; Fuerst and McAllister 2008 [commercial buildings]; Miller et al. 2008 [office buildings]). Further, there is some evidence that rents for green buildings may be more volatile than rents for other buildings, perhaps because green certification still is treated as a luxury good (Eichholtz et al. 2010).

In terms of the costs and benefits of adopting land-use patterns that are more energy- and environmentally efficient, there is disagreement as to how much is saved, but general agreement that development patterns that adhere to the “five Ds,” particularly density, costs less on average than more sprawling patterns (Burchell and Mukerji 2003; Coyne 2003; Muro and Puentes 2004; Speir and Stevenson 2002; Transportation Research Board 2009). The savings result primarily from lower infrastructure costs (i.e., shorter roads, sidewalks, and sewer and water pipes) and lower per capita cost for public services such as police stations, fire stations, and schools (Muro and Puentes 2004; Speir and Stevenson 2002; Transportation Research Board 2009). “Smart growth” land-use patterns also have been found to reduce per unit land costs and parking costs, and they may result in household transportation cost savings, reduced traffic accidents, energy conservation, and pollution emission reductions, among other benefits (Litman 2011c). Several scholars argue, however, that beyond a certain density, costs increase (Ladd 1992), and some opponents contest the claimed cost savings for smart-growth policies (Cox and Utt 2004).

Estimates of the costs and benefits of making buildings and neighborhoods more resilient to weather-related harms are much less certain. The majority of studies have focused on the general costs of adapting to sea-level rise (Agrawala and Fankhauser 2008) and have not focused specifically on the costs or benefits of adapting buildings to protect against weather-related harms. The very long lifespan of buildings complicates various possible adaptation measures (Hallegate, Lecocq, and de Perthuis 2011) because buildings must not only be built for their current climate, but also for the climate 100 years in the future (which, of course, is highly uncertain). One study, however, compared how homes built before and after Florida’s 2001 Building Code revisions, which were designed to encourage hurricane resiliency, and found that structures built under the revised code sustained less damage on average than those built between 1994 and 2001 under the Standard Building Code (Gurley 2006).

We know too little about why some households choose to rent or buy more energy-efficient homes, why some opt for denser, transit-accessible neighborhoods, and how and when households decide to adjust personal behaviors to reduce energy use. We also need to know more about how building owners make decisions about energy efficiency investments that may have positive spillovers for tenants that the owner cannot capture. We need to better understand how billing arrangements in market-rate, public, and subsidized housing may affect tenants’ energy consumption, and about how much efficiency can be encouraged through innovative tools such as housing/transportation indices, housing energy consumption labeling, and financing mechanisms designed to encourage energy efficient behaviors. Further, we need to know which financing and other policies may deter private owners and public housing authorities from making energy efficiency improvements to their buildings. Finally, rigorous assessment of costs and benefits of energy efficiency investment is needed to determine whether such investments can achieve double or triple bottom lines by lowering operating costs, improving tenants’ quality of life and health, and providing good jobs for local residents.

We also need a better understanding of how federal policies ranging from tax incentives, flood insurance, environmental regulations, and disaster relief programs need to be changed to encourage the

private market to site, build, rehabilitate, and operate the most energy-efficient and resilient buildings. We also need to know more about how public policymakers such as local land-use officials and code enforcement agencies can be encouraged to allow or require more sustainable land-use patterns.

State and local governments across the country are adopting laws and policies to mitigate energy use and the accompanying greenhouse gases, including green building codes, transit-oriented design requirements, and programs to encourage infill and greater density. Boston recently amended its Zoning Code, for example, to provide for a Smart Growth Overlay District, allowing higher-density zones closer to transportation nodes where the infrastructure can accommodate expanded economic development and new housing (Smart Growth Overlay District, Boston Zoning Code and Enabling Act, §§ 87-1 to -16 (2011)). We know too little, however, about how those laws and policies are working, or about which are most cost effective.

A Policy-Relevant Research Agenda

- Assessment of policies to encourage green retrofits of existing buildings, using literature reviews, scans, and interviews to identify innovative incentive programs or other approaches to encourage owners to maintain and improve the energy efficiency of existing housing, and to take advantage of other renovation opportunities (such as rehabilitation needed to adapt housing for the needs of senior citizens) to also encourage energy efficiency. The findings could then be used to construct pilot tests of different approaches and to assess the potential for taking the programs to scale.
- Experiments with different methods of framing and delivering information to affect household choices and behaviors that determine energy efficiency. Labeling, provision of data comparing a household's consumption to the mean, neighborhood campaigns, appliance metering, and other ways of informing households about their energy consumption patterns, for example, are being tested but require further analysis and comparison. Methods that work with homebuyers may not be optimal for renters, and other demographic differences may affect which methods work best, so experiments must be careful to include a broad cross-section of different kinds of households. The cost-efficiency and scalability of the programs also require further analysis.
- Experiments testing whether changes in pricing or billing arrangements for a tenant's energy use, such as methods that allow tenants to share in energy savings they help a building owner achieve, can help reduce energy use.
- Experiments that test how information/training can guide market-rate, subsidized, and public housing landlords to make more energy-efficient investments.
- Analysis of regulations, procedures, and financing requirements that interfere with efforts to build more energy-efficient and resilient housing.
- Analysis of the costs and efficacy of different ways of bringing local or regional land-use, transportation, infrastructure, and public services agencies together with developers, environmentalists, and energy providers to craft new tools for promoting more energy-efficient land-use patterns and building types.
- Assessment of market demand for and provision of energy-efficient homes. Is the market taking care of the problem? If not, why not—what barriers/market failures prevent the market from meeting the demand?
- Assessment of the extent to which the VMT associated with a community varies with the racial and economic diversity within the community. For example, does a community with housing available

for a range of incomes result in less auto travel for commuting than more homogenous communities?

Conclusion

Four significant challenges will confront housing and community development policymakers over the next decade: the long-term effects of the housing market crisis on today's households and on the next generation; increasing poverty coupled with persistently high income inequality and volatility; continued concentration of poor and minority households in low-quality housing and low-opportunity neighborhoods; and the growing need for sustainable and resilient buildings and communities. Addressing each challenge will be especially difficult given the fiscal constraints facing federal, state, and local governments. We have summarized briefly what existing research shows about each of the challenges and highlighted what more policymakers need to know in order to craft effective programs and policies to address the challenges. We hope that researchers across the nation will take up the suggested research agenda to help policymakers at all levels of government better understand the implications the challenges have for housing and community development programs and policies, and to help them design cost-effective responses to the challenges.

Table 1: Potential Research Projects

Research Questions	Potential Research Projects
<p>The long-term effects of the housing crisis: the desirability of strategies to encourage homeownership</p> <ul style="list-style-type: none"> • What are the risks and benefits of homeownership in the current economy? • Why do households choose to buy homes? • What is the cost-effectiveness of incentives and programs designed to encourage homeownership and bolster households' ability to sustain homeownership? • Can alternative tenure forms, such as shared equity and rent-to-own models, achieve the benefits of homeownership while reducing its risks? 	<ul style="list-style-type: none"> • A study reassessing the overall benefits and costs of homeownership in light of the market crash (relative to other tenure choices, and relative to other savings and investments the household might have made) • An experimental study exploring the benefits that alternatives to traditional homeownership – such as shared equity, rent-to-own and other lease-purchase programs, and long-term rental leases (with and without renter's insurance) -- can offer to households and to communities.
<p>The long-term effects of the housing crisis: the demand for homeownership and supply of owner-occupied homes</p> <ul style="list-style-type: none"> • To what extent is negative equity locking current homeowners into their current location? What are the effects of any such lock-in on mobility, employment, neighborhood stability, and children's well-being? • How are falling house values affecting household formation? • How is the housing crisis affecting retirement decisions and critical investments in human capital? • How is the housing crisis affecting investments in home maintenance and improvement? • What are the most cost-effective strategies for addressing excess housing inventories? 	<ul style="list-style-type: none"> • A study using the PSID, AHS, and HRS to identify the challenges the aftermath of the housing crash pose to the ability of families to become homeowners in the future, and to assess how the losses in equity may affect the likelihood that the next generation of households will become homeowners, and how those effects vary across racial and ethnic groups. • A study identifying whether decisions about household formation are sensitive to home equity gains or losses. • A study exploring how losses in home equity, and potential spatial lock-in, are affecting families and communities. • A study identifying how losses in home equity are affecting households' decisions to invest in home maintenance and improvements. • Demographic and market studies analyzing excess inventories in different metropolitan areas and estimating how long it will take the market to absorb them, taking into account projected household growth. • A study describing best practices in addressing excess inventories in different metropolitan areas, focusing on both Rust Belt and Sun Belt cities, as the challenges they face differ.
<p>The long-term effects of the housing crisis: preparing households for sustainable homeownership</p>	<ul style="list-style-type: none"> • A survey of households to assess how much households know about the potential benefits and costs of homeownership, and the sources of their

Research Questions	Potential Research Projects
<ul style="list-style-type: none"> What are the most cost-effective ways to educate and prepare households for owning a home and taking on debt? 	<p>information about those costs and benefits.</p> <ul style="list-style-type: none"> Experiments to understand the efficacy of different models of homeowner education and counseling.
<p>The long-term effects of the housing crisis: neighborhood stabilization</p> <ul style="list-style-type: none"> What strategies are most effective in addressing the challenges of the REO inventory? What land-use and other regulatory and investment policies are most cost-effective in stabilizing neighborhoods? 	<ul style="list-style-type: none"> A study assessing the conditions of the REO stock in a sample of markets, how much rehabilitation work they are likely to require, and the degree to which servicers are maintaining or renovating them. A study identifying the degree to which local land-use practices and regulations hinder efforts to sell and redevelop REO properties. A study analyzing who is buying REO properties, how much they are investing in them, and how quickly they are reselling them. A study identifying the land-use practices that have most successfully buffered communities from housing price declines, foreclosures, and vacancies. A study to assess what investments other than housing (such as infrastructure, crime control, public transit, or school construction) have been associated with lower housing price declines, foreclosures, and vacancies. A study to assess the relative effectiveness and costs of different approaches to community stabilization, such as tax lien and land banking programs.
<p>The long-term effects of the housing crisis: single-family rental housing</p> <ul style="list-style-type: none"> Who are the owners of surplus single-family homes built for homeownership but converted to rental properties? How are conversions of single-family homes to rental properties affecting neighborhoods? What are the most effective strategies for ensuring appropriate maintenance of single-family rentals? 	<ul style="list-style-type: none"> A study of the owners of single-family rental properties to understand their characteristics, business model, financing, and capabilities. A study of the tenants who live in single-family rentals and their housing trajectories. A study analyzing how conversions of single-family homes are affecting surrounding neighborhoods.

Research Questions	Potential Research Projects
<p>The long-term effects of the housing crisis: multifamily rental housing</p> <ul style="list-style-type: none"> • What is the financial health of multifamily housing? • How are tenants affected when building owners are in financial distress? • Which programs are most cost-effective at helping ensure the continued stability of over-leveraged buildings? 	<ul style="list-style-type: none"> • A study of owners of small and larger multifamily properties in different markets to assess the financial health of their properties. • A series of case studies of distressed, multifamily developments to examine what happens to the building and the tenants over time.
<p>Increasing poverty coupled with persistent income inequality and volatility: effect on housing needs</p> <ul style="list-style-type: none"> • How is the demand for housing vouchers and other rental subsidies changing as a result of increasing poverty and income volatility? • What are characteristics of households seeking subsidized rental housing, and their use of subsidies and how are those changing? • How do households who don't seek assistance manage to meet their housing needs? • How are low- and moderate-income homeowners managing in the face of income volatility? 	<ul style="list-style-type: none"> • Analysis of users of and applicants for rental housing subsidies, and of the uses of the subsidies. • Analysis of how low-income households manage to cover housing costs, especially in high-cost metropolitan areas, using financial diaries and interviews. • Analysis of tenant evictions to better understand the conditions under which tenants receive eviction notices and the aftermath of those notices.
<p>Increasing poverty coupled with persistent income inequality and volatility: developing more cost-effective housing assistance and housing types</p> <ul style="list-style-type: none"> • What are the most cost-effective approaches to meeting the housing needs exacerbated by increasing poverty and volatility? • What are the barriers to production of smaller, basic units that could address housing needs at lower costs? • What are the most cost-effective ways of reducing reliance on illegally subdivided units or other substandard housing? 	<ul style="list-style-type: none"> • Experimental analyses of pilot programs that offer rental subsidies of more limited size or duration than the current voucher program. • A study comparing the benefits delivered by and the cost-effectiveness of different types of place-based assisted housing and tenant-based subsidies, testing how differences vary across local markets. • A study analyzing the administration of local voucher programs to learn if certain administrative strategies can help improve voucher utilization and success rates. • Analysis of the illegal or improvised rental housing market to determine how many people live in units that do not satisfy relevant housing codes, or in other substandard housing arrangements, and assessment of the cost-effectiveness of approaches to bringing dangerous illegal units up to code, and to providing housing models that meet the needs that substandard housing is filling.

Research Questions	Potential Research Projects
	<ul style="list-style-type: none"> • Analysis of how the housing market could better address the risks of income volatility or economic risks more generally, by providing longer term leases, offering renter's insurance or renter escrow accounts, or making shared housing arrangements more feasible. • Pilot projects to test tools to help homeowners weather income volatility, such as escrow accounts, shared equity models, and shared housing arrangements. • Analysis of how much the volatility of tenants' incomes costs landlords in turnover and unpaid rent, and how those costs factor into owners' decisions to provide and maintain lower cost housing.
<p>Increasing poverty coupled with persistent income inequality and volatility: effect on homelessness</p> <ul style="list-style-type: none"> • What strategies for identifying those households at risk of becoming homeless because of income shocks are most accurate and cost-effective? • What are the most effective strategies for targeting those households most at risk of homelessness for assistance? • What kinds of assistance—such as short-term loans or grants and assistance in locating housing and paying the moving costs and security deposits needed for the move—are most cost-effective for preventing homelessness? 	<ul style="list-style-type: none"> • Analysis of the characteristics of the households that manage to withstand income shocks versus those that do not, and what this implies about how to target households at risk of becoming homeless because of income shocks. • Identification and evaluation of innovative practices that provide assistance designed to keep households at risk of homelessness from having to resort to shelters (by providing emergency loans or grants for rent payments, for example), to assess what interventions can be most effective in helping households weather income shocks.
<p>Increasing poverty coupled with persistent income inequality and volatility: regulatory reforms to reduce housing costs</p> <ul style="list-style-type: none"> • What are the most promising options for reducing costs of construction, maintenance, or operation to make new and rehabbed housing more affordable? • How do different regulations affect the ongoing cost of operating and maintaining housing? 	<ul style="list-style-type: none"> • Analysis of best practices to create less expensive housing units, like single-room occupancy units (SROs) and accessory apartments. • Assessment of regulatory and other barriers to shared housing, and analysis of alternative reforms. • Pilot projects to rigorously quantify the cost-savings possible through various regulatory reforms. • Assessment of the circumstances under which state and local governments have reformed or eliminated inefficient regulations, and analysis of how to foster the climate in which reforms are possible.
<p>Persistent concentration of poor and minority households in low-quality housing and low-opportunity neighborhoods: voucher assistance</p>	<ul style="list-style-type: none"> • Experimental analyses to determine whether presenting voucher households with different forms of framing of information about the conditions of buildings and neighborhoods and the quality of local

Research Questions	Potential Research Projects
<ul style="list-style-type: none"> • To what extent is the demand for housing units and neighborhoods limited by information gaps, shaped or constrained by the current nature of economic and racial segregation, affected by realtor behavior, and/or responsive to policies and incentives? • What are the most cost-effective strategies to “nudge” households to higher-quality housing and neighborhoods that offer richer opportunities? • What barriers or constraints, if any, do developers face in supplying subsidized housing in such underserved communities? • Does the presence or absence of antidiscrimination laws affect the ability of voucher recipients to reach higher-opportunity neighborhoods? • What is the relative efficacy of different approaches to monitoring the housing quality of units lived in by voucher holders? • What is the efficacy of programs to provide information, mobility counseling, or other assistance to voucher recipients looking for housing? 	<p>services (such as schools) could cause households to change their residential choices.</p> <ul style="list-style-type: none"> • Surveys of landlords to learn what they see as the costs and benefits of participating in the voucher program and to assess potential programs to encourage participation. • Quasi-experimental analyses comparing the quality/conditions of the neighborhoods reached by voucher holders to those of the neighborhoods reached by other comparable households.
<p>Persistent concentration of poor and minority households in low-quality housing and low-opportunity neighborhoods: siting of subsidized housing</p> <ul style="list-style-type: none"> • What are the barriers and trade-offs developers face in building subsidized housing in high-opportunity neighborhoods? • What strategies are most cost-effective in encouraging the siting of subsidized housing in higher-opportunity neighborhoods? 	<ul style="list-style-type: none"> • A study of the barriers or constraints, if any, faced by developers in building LIHTC housing developments in high-opportunity areas. • A study describing the relative quality of the services and conditions in neighborhoods lived in by tenants in LIHTC housing developments in different jurisdictions. • A study using new LIHTC tenant data to examine how the incomes and racial composition of LIHTC tenants compare with the mix of residents living in the neighborhoods in which developments are sited. • A study exploring whether and how the coordination of services in subsidized housing developments can help offset some of the negative outcomes associated with living in higher-poverty areas and help families and children advance socially and economically. • A study of private owners of LIHTC housing in different markets to probe their motivations for

Research Questions	Potential Research Projects
	participating in the program, their rental income and operating costs, and their level of investment in properties.
<p>Persistent Concentration of Poor and Minority Households in Low-Quality Housing and Low-Opportunity Neighborhoods: Affirmatively Furthering Fair Housing</p> <ul style="list-style-type: none"> • How do households make choices about neighborhoods? • Could more and different information, or different framing of choices encourage households to consider a wider set of communities in choosing where to live? • What explains why segregation levels have changed so much more rapidly in some areas than in others? • What are the most effective strategies for integrating neighborhoods and keeping them stably integrated? • Did neighborhoods that became more integrated do so because racial minorities moved into largely white areas or white households moved into largely minority areas? 	<ul style="list-style-type: none"> • A randomized experiment testing whether households adjust residential choices when presented with different forms of information about neighborhood services and conditions. • An evaluation of the services housing counselors provide to renters. • Surveys and analyses of housing searches of lower-income households and their location choices to study the extent to which different approaches to housing search might help them reach higher-opportunity areas. • A study of affirmative marketing efforts to establish best practices and determine what kinds of marketing strategies can draw a more diverse set of applicants to a housing development. • An analysis of recent changes in segregation using longitudinal geocoded survey data to analyze how economic and racial segregation have changed since 2000, how the neighborhood choices of poor households have changed during the last few years, and to identify the metropolitan areas in which patterns have changed the most to glean lessons for policy. • A qualitative study of the residents of racially and/or economically integrated neighborhoods to learn how they experience the diversity of their communities. • An assessment of shifts in the access that poor households have to higher-opportunity neighborhoods, evaluating whether poor households are more likely to end up in lower-opportunity neighborhoods in recent years than they were before the housing market crisis, for example. • A study exploring whether income gains in lower-income minority neighborhoods can lead to stable economic and racial integration.
<p>Persistent concentration of poor and minority households in low-quality housing and low-opportunity neighborhoods: regulations and supply-side incentives</p> <ul style="list-style-type: none"> • To what extent is supplier behavior constraining the housing and neighborhood choices of lower income households? • What information do tenants use to choose buildings? 	<ul style="list-style-type: none"> • A study of the relative costs of building housing in high- versus low-opportunity areas. • A study of suburban zoning codes and permitting practices to learn how many higher-income suburbs are truly allowing the construction of multifamily housing. • An analysis of how owners and managers of rental properties decide about maintenance and repairs. • A study to test pilot efforts to modify code enforcement practices to encourage landlords to

Research Questions	Potential Research Projects
<ul style="list-style-type: none"> • Are voucher recipients adequately aware of their opportunities to exit and move to a different unit? • How does housing quality affect individual tenants? • What types of policies might encourage landlords to upgrade buildings in lower-income areas and provide lower-rent housing in higher-income areas? 	<p>invest more in maintaining their buildings.</p> <ul style="list-style-type: none"> • A quasi-experimental analysis of the importance of housing quality, exploiting variation in the quality of buildings where households end up after natural disasters or when public housing developments are demolished.
<p>The growing need for sustainable and resilient buildings and communities</p> <ul style="list-style-type: none"> • What are costs and benefits of various energy efficiency investments? • Why do some households choose to rent or buy more energy-efficient homes, opt for denser, transit-accessible neighborhoods, or adjust personal behaviors to reduce energy use? • How do building owners make decisions about energy efficiency investments? • How do billing arrangements in market-rate, public, and subsidized housing affect tenants' energy consumption? • What tools (such as housing/transportation indices, housing energy consumption labeling, and financing mechanisms) are cost effective to encourage energy-efficient behaviors? • How do federal, state, and local policies ranging from tax incentives, flood insurance, land-use and environmental regulations, and disaster relief programs need to be changed to encourage the private market to site, build, rehabilitate, and operate buildings in the energy-efficiently and resiliently? • What can the federal government do to encourage local land-use officials and code enforcement agencies to allow or require more sustainable land-use patterns? 	<ul style="list-style-type: none"> • Assessment of policies to encourage owners to maintain and improve the energy efficiency of existing housing, and to take advantage of other renovation opportunities (such as rehabilitation needed to adapt housing for the needs of senior citizens), to also encourage energy efficiency. • Experiments with different methods of framing and delivering information to affect household choices and behaviors that determine energy efficiency. • Experiments testing whether changes in pricing or billing arrangements for a tenant's energy use can help reduce energy use. • Experiments that test how information/training can guide market-rate, subsidized, and public housing landlords to make more energy-efficient investments. • Analysis of regulations, procedures, and financing requirements that interfere with efforts to build more energy-efficient and resilient housing. • Analysis of the costs and efficacy of different ways of bringing local or regional land-use, transportation, infrastructure, and public services agencies together with developers, environmentalists, and energy providers to craft new tools for promoting more energy-efficient land-use patterns and building types. • Assessment of market demand for and provision of energy-efficient homes. • Assessment of the extent to which the VMT associated with a community varies with the racial and economic diversity within the community.

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